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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/986,919      | 11/13/2001  | Jeawoan Lee          | 1567.1021           | 6274             |

21171 7590 01/14/2005

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| EXAMINER |
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TSANG FOSTER, SUSY N

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| ART UNIT | PAPER NUMBER |
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1745

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/986,919

Applicant(s)

LEE ET AL.

Examiner

Susy N Tsang-Foster

Art Unit

1745

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 21 December 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1-31, 42 and 43.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_.

Continuation of 2. NOTE: The proposed amendments to the claims change the scopes of claims 2-4, 8, 14-16, and 20 that were not presented in the previous amendment and would require further search and consideration by the Examiner.

Continuation of 5. does NOT place the application in condition for allowance because: The claim objections under 37 CFR 1.75 (c), the claim rejections under 35 USC 112, first paragraph, and all art rejections in the previous office action are maintained for the reasons of record. The objection to the specification under 35 USC 132 is withdrawn in view of the declaration filed on 12/21/2004 as to the accuracy of inclusion of subject matter from foreign application incorporated by reference.

With respect to claim rejections under 35 USC 112, first paragraph, applicant contends that the recited range set forth in claims 1 and 13 is supported by claims 3, 4, 15, and 16 as filed and specific examples 1-3 in the specification. The Examiner reviewed claims 3, 4, 15, and 16 as originally filed and did not find support for excluding the 90% porosity endpoint from the claimed range. Examples 1-3 do not address what is not applicant's invention, that is, 90% porosity is not part of applicant's invention.

With respect to art rejections based on Chu et al. as modified by Peled et al., applicant asserts that there is insufficient evidence of record as to why one of ordinary skill in the art would have been motivated to use the porosity as suggested in Peled et al. in the context of teflonated carbon for the matrix of Chu et al. In response, the porosity of the current collector of Peled et al. is an independent issue from the fact that the current collector of Peled is coated with a carbon teflon coating. According to MPEP 2105, in order to establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. One of ordinary skill in the art would be motivated to modify the porosity of the current collector of Chu et al. given the teachings of Peled because the increased porosity of the current collector would increase the loading of the active material and this motivation is supported by US Patent No. 6783895 B2 to Imai et al., wherein the reference teaches that a porous current collector having large porosity enables a high loading density for the active material (col. 1, lines 46-52).

With respect to applicant's assertions that the current collector of Chu et al. do not comprise a conductive agent as claimed in claim 6, the applicant did not specifically claim what the conductive agent is and the metal in the current collector is a conductive agent.

With respect to art rejections based on either Chu et al. as modified by Turi et al. or Barton et al. as modified by Turi et al., applicant contends that the primer of the Turi et al. reference cannot be used with a porous current collector because the use of the primer would reduce the open nature of the matrix of the porous current collector. In response, the applicant has not provided any experimental evidence that the primer would significantly coat the pores of the current collector and inhibit the ability of the current collector to be filled with an active material.

Any inquiry concerning this communication or earlier communications should be directed to examiner Susy Tsang-Foster, Ph.D. whose telephone number is (571) 272-1293. The examiner can normally be reached on Monday through Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at (571) 272-1292.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Susy Tsang-Foster  
Primary Examiner  
Art Unit 1745